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tography. In selecting the comparison stars for use with the parallax stars, care should be exercised, so far as possible, to employ no stars for comparison that have a sensible proper motion. Furthermore, the magnitudes of the comparison stars should be as nearly as possible the same as those of the respective parallax stars. For stars below the 6.5 magnitude these conditions would not be difficult of attainment; for brighter stars the difficulty would increase very rapidly with the magnitude, and this constitutes sufficient reason for turning those stars over to the heliometers. With such an arrangement of comparison stars and with no observing appliances further than those which are already available, we appear to have the means of attacking the general problem of star-parallax more effectively than ever before. It would be difficult to conceive of a method which offers better security against the influence of systematic error.

The work of Professor Kapteyn well illustrates the possibility of putting new life into a hackneyed subject without the aid of startling novelties either in the details of methods, or in the apparatus employed.

OBSERVATIONS OF THE DARK TRANSIT OF *JUPITER'S* THIRD SATELLITE ON AUGUST 20, 1891, AT WINDSOR, NEW SOUTH WALES.

By John Tebbutt, F. R. A. S.

The times of the various phases are local sidereal.

h. m. s.

18 33 34; the satellite had advanced considerably on the disc of its primary and was visible as an oval dark spot on the north edge of one of the slender belts in the south equatorial zone. The major axis of the oval was parallel to the belt. The satellite was not nearly so dark as its shadow, which was also visible.

18 50 59; satellite still visible.

19 24 59; it was now at about mid-transit, and the dark phase had slightly increased in depth.

20 3 59; the preceding observations were made with the 4½-inch equatorial and a power of 120. I was now enabled to turn the 8-inch telescope on the planet, and with a

h. m. s.

power of 74, found the satellite to be quite conspicuous as a dark spot.

The following measures were made of the satellite's position on the disc by turning the distance-threads of the micrometer parallel to the belts, and placing one on the satellite and the other alternately across each pole of the planet.

20 11 54; distance from south pole = 12″.23 (3 measures).
20 13 14; distance from north pole = 34″.63 (3 measures).
20 21 59; satellite had obviously faded.
20 25 59; still plain, but fainter.
20 29 49; much fainter.
20 32 9; very indistinct.
20 33 34; seen with great difficulty.
20 34 59; not certainly visible.
20 47 59; satellite had been suspected for some time, and was now certainly seen as a faint bright spot just within the limb with powers 74 and 112.
20 50 39; distinctly seen as a bright spot with a power of 112 at internal contact.
20 54 44; bisection.
20 58 59; external contact.

Clouds prevented observation of the transit of the 27th of the same month.

WINDSOR, N. S. WALES, Sept. 4, 1891.

(SEVENTH) AWARD OF THE DONOHOE COMET MEDAL.

The Comet Medal of the Astronomical Society of the Pacific has been awarded to E. E. BARNARD, Astronomer of the Lick Observatory, for his discovery of a Comet at $0^h\ 55^m$ G. M. T., October 3, 1891. This is the nineteenth comet discovered by Mr. BARNARD.

The Committee on the Comet Medal,

EDWARD S. HOLDEN,
J. M. SCHAEBERLE,
CHARLES BURCKHALTER.

(Dated) October 12, 1891.